FINAL ENVIRONMENTAL ASSESSMENT

DRAINAGE DITCH AND EROSION CONTROL IMPROVEMENT FOR THE PRIMARY INSTRUMENT RUNWAY

ELLSWORTH AIR FORCE BASE, SOUTH DAKOTA

April 2004

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FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)

DRAINAGE DITCH AND EROSION CONTROL IMPROVEMENT
FOR THE PRIMARY INSTRUMENT RUNWAY - ELLSWORTH AIR FORCE BASE
MEADE AND PENNINGTON COUNTIES, SOUTH DAKOTA

INTRODUCTION

In order to meet airfield clear zone requirements (Air Force Manual 32-1123, Volume 1, Chapter 3, Task 3.5), the United States Air Force (USAF) proposes to extend an existing stormwater culvert located near the primary instrument runway at Ellsworth Air Force Base (AFB).

Currently, there is a stormwater culvert that extends from under the south edge of the Base primary instrument runway and discharges to an open ditch and associated wetlands. The ditch is located in the northern half of Operable Unit 12 (OU-12). Air Force Manual 32-1123, Volume 1, Chapter 3, Task 3.5 states that there needs to be 1,000 feet of level graded area in the airfield clear zone. The existing ditch is approximately 20 feet deep in some areas and could cause damage to aircraft in an emergency landing within the airfield clear zone. The ditch and associated wetlands also attract deer and birds, which pose an animal collision hazard to aircraft using the runway.

DESCRIPTION OF THE PROPOSED ACTION

The proposed action would involve adding approximately 850 linear feet of concrete culvert to the existing stormwater culvert that extends from under the south edge of the primary instrument runway and discharges into a drainage ditch and associated wetlands. Once the culvert is installed and connected, the drainage ditch would be backfilled to provide a graded level area in the airfield clear zone.

There are no other action alternatives, short of moving the runway or relocating the Base that would bring the base in compliance with airfield clear zone requirements. Fencing and/or Kevlar wire could be placed around and across the wetlands to deny access to the wildlife; however, this would not eliminate clear zone safety issues and was not carried forward for further analysis.

ALTERNATIVES TO THE PROPOSED ACTION

No Action: Under the no action alternative, the existing drainage ditch would not be modified, despite the non-compliant airfield clear zone.

SUMMARY OF ENVIRONMENTAL IMPACTS

Remedial investigations at OU-12, which falls within the proposed project area, were conducted in 1993/94. These investigations indicated that chemical constituents, primarily petroleum components from flightline operations and storage activities, could pose potential risks to human health and the environment within the proposed construction area. Corrective actions in the form of a soil cover and institutional controls were implemented. The project would require a construction waiver and U.S. Environmental Protection Agency and South Dakota Department of Environment and Natural Resources review and concurrence. Design and construction activities would be coordinated with Environmental Restoration Program staff to avoid exposing construction workers to chemical constituents present in surface water, sediments, and nearby

soils. Planning and construction techniques are available to minimize exposure to affected media and related potential risks and to control temporary construction impacts. The soil cover would be replaced to maintain corrective action integrity.

Approximately 1.2 acres of non-wetland riparian and associated drainageway slope vegetation and wildlife habitat within the project construction limits would be converted to upland mown grass. Approximately 0.2 acres of jurisdictional wetlands would be filled as part of the project. This loss cannot be avoided. However, the project has been designed to limit the loss of wetlands to the minimum necessary to meet established safety criteria. Safety fence would be installed to prevent construction equipment and/or vehicles from entering adjacent wetland and riparian areas. All 0.2 acres of the filled jurisdictional wetland would be replaced one-to-one at the 26-acre block of land south of the riding stables, east of the RV storage lot, and north of the CE building, which has an existing drainage ditch running through it. The new wetlands location is preferable to the location that would be filled in with the proposed action for the following reasons:

- Wetlands in general increase the potential for attracting wildlife and increasing the aircraft strike hazard in the airfield environment. It is in the interest of safety to minimize wetlands in the airfield.

- The wetlands involved are a small acreage of ditch banks only marginally performing the functions of wetlands. They are not considered of extraordinary value to wildlife in general, or protected species in particular.

The 28 CES/CEV would obtain a permit from the U.S. Army Corps of Engineers (USACE) in accordance with Section 404 of the Clean Water Act of 1977, as amended in 1991. Temporary dust, noise, and stormwater impacts may occur, but can be easily controlled by common construction practices and oversight. Completion of the project would bring Ellsworth AFB into compliance with USAF requirements for a 1000-foot graded area in the airfield clear zone.

FINDINGS

Implementing the proposed action would not have a significant impact upon the environment, nor would it constitute a major Federal action of significant magnitude to warrant preparation of an Environmental Impact Statement. Pursuant to Executive Order 11988 and Executive Order 11990, the authority delegated in SAFO 791.1, and taking the above information into account, I find that there is no practicable alternative to this action, and the proposed action includes all practicable measures to minimize harm to the wetlands and floodplain environments.

Bruce A Wright

Date: 1 JUL 04

BRUCE A. WRIGHT
Lieutenant General, USAF
Vice Commander

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AICUZ	Air Installation Compatible Use Zone
BASH	Bird Animal Strike Hazard
CE	Civil Engineering
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES	Civil Engineering Squadron
CEV	Environmental Engineering Flight
CWA	Clean Water Act
db	Decibel
DNL	Day-Night Average A-Weighted Sound Level
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
ERP	Environmental Restoration Program
FFA	Federal Facility Agreement
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY	Fiscal Year
LOLA	live ordnance loading area
NEPA	National Environmental Policy Act
OU	Operable Unit
RI	Remedial Investigation
ROD	Record of Decision
RV	recreational vehicle
SD DENR	South Dakota Department of Environmental and Natural Resources
SDGFP	South Dakota Department of Game, Fish, and Parks
SDNHP	South Dakota Natural Heritage Program
Tpy	tons per year
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

FINAL
Environmental Assessment

Drainage Ditch and Erosion Control Improvement For the Primary Instrument Runway

Ellsworth Air Force Base
Meade and Pennington Counties, South Dakota

January 2004

Proposed Action: The United States Air Force (Air Force) proposes to extend an existing stormwater culvert located near the primary instrument runway at Ellsworth Air Force Base (AFB) to meet airfield clear zone requirements. The extension would involve adding approximately 850 linear feet of concrete culvert to the existing stormwater culvert that extends from under the south edge of the primary instrument runway and discharges into a drainage ditch and associated wetlands. Once the culvert is installed and connected, the drainage ditch would be backfilled to provide a graded level area in the airfield clear zone. The existing ditch is approximately 20 feet deep in some areas and could cause damage to aircraft in an emergency landing within the airfield clear zone. The ditch and associated wetlands also attract wildlife, which poses a collision hazard to aircraft using the runway.

Type of Statement: Environmental Assessment

Lead Agency: USAF Air Combat Command 28th Support Group

Responsible Official: Joseph D. Brown IV, Colonel, USAF, 28th Bomb Wing Commander, 1958 Scott Drive, Ellsworth AFB, South Dakota 57706

For Further Information Contact: Lt Nathan Shirey, 28 CES/CEVP, 2103 Scott Drive, Ellsworth AFB, South Dakota 57706 (605) 385-2680

EXECUTIVE SUMMARY

Implementing the proposed action would not have a significant impact upon the environment. Remedial investigations at Operable Unit 12 (OU-12), which falls within the proposed project area, were conducted in 1993/94. These investigations indicated that chemical constituents, primarily petroleum components, could pose potential risks to human health and the environment. Corrective actions in the form of a soil cover and institutional controls were implemented. As a result, the project would require a construction waiver and U.S. Environmental Protection Agency (USEPA) and South Dakota Department of Environment and Natural Resources (SD DENR) review and concurrence. Design and construction activities would be coordinated with Environmental Restoration Program (ERP) staff to avoid exposing construction workers to chemical constituents. The soil cover would be replaced to maintain corrective action integrity.

Approximately 1.2 acres of non-wetland riparian and associated drainageway slope vegetation and wildlife habitat within the project construction limits would be converted to upland mown grass, keeping all work in accordance with Unified Facilities Criteria 3-260-01 and FAR Part 77. There would be a

corresponding reduction in potential wildlife exposure to contaminated sediments/soils in the ditch after the culvert is installed. An estimated 0.2 acres of jurisdictional wetlands would be filled, and a Section 404 permit would be obtained from the U.S. Army Corps of Engineers (USACE). The Air Force would coordinate with the South Dakota Department of Game, Fish, and Parks (SDGFP) to avoid or minimize impacts to Swainson's hawk habitat. Safety fence would be installed to prevent equipment and/or vehicles from entering adjacent riparian/wetland areas. As per the Final Base Wide Wetland Management Plan Tier 1 (USAF 1996c) a one-to-one acre wetland mitigation would be constructed at the 26-acre block of land south of the riding stables, east of the recreational vehicle (RV) storage lot, and north of the Civil Engineering (CE) building, which has an existing drainage ditch running through it. Temporary dust, noise, and stormwater impacts may occur, but would be controlled by standard construction practices and oversight.

1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

This environmental assessment (EA) examines the possible environmental impacts of the proposed action to extend an existing stormwater culvert located near Ellsworth Air Force Base's (AFB's) primary instrument runway to meet airfield clear zone requirements. Ellsworth AFB is located near Rapid City, South Dakota (Figures 1 and 2). Currently, there is a stormwater culvert that extends from under the south edge of Ellsworth AFB's primary instrument runway and discharges to an open ditch and associated wetlands (Figure 3). The drainage ditch is an obstruction in the event of an aircraft crash landing.

This EA is prepared pursuant to the National Environmental Policy Act (NEPA) and complies with the implementing regulations at 40 CFR 1500 through 1508. This project would result in the placement of 0.2 acres of fill in a jurisdictional wetland. This requires a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) to be signed by the Air Combat Command Vice Commander in accordance with AFI 32-7061 – Environmental Impact Analysis Process, AFI 32-7064 – Integrated Natural Resources Management, and 32 CFR Part 989.15, Environmental Impact Analysis Process (EIAP). In addition, 28 CES/CEV would obtain a permit from the USACE South Dakota Regulatory Office in accordance with Section 404 of the Clean Water Act (CWA) of 1977, as amended in 1991.

1.2 PURPOSE AND NEED FOR ACTION.

The Air Force proposes to extend an existing stormwater culvert located near the primary instrument runway to meet airfield clear zone requirements. Air Force Manual 32-1123, Volume 1, Chapter 3, Task 3.5 states that there needs to be 1,000 feet of level graded area in the airfield clear zone. Unified Facilities Criteria (UFC), Chapter 3, Table 3.2, Item # 12, Class B Runway states "The ground surface within this area must be clear of fixed or mobile objects, and graded to [given requirements]". The extension would involve adding approximately 850 linear feet of concrete culvert to the existing stormwater culvert that extends from under the south edge of the primary instrument runway and discharges into a drainage ditch and associated wetlands (Figure 4). Once the culvert is installed and connected, the drainage ditch would be backfilled to provide a graded level area in the airfield clear zone. Portions of the existing drainage ditch are approximately 20 feet deep and would continue to pose a risk to aircraft in an emergency landing within the airfield clear zone. The U.S. Department of Transportation Federal Aviation Administration, Advisory Circular, AC No: 150/5200-33 - HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS, Section 1-3 states a distance of 10,000 feet is recommended between an airport's aircraft movement areas, loading ramps, or aircraft parking areas and the wildlife attractant. Birds and deer inhabit the drainage ditch and its surrounding area, creating a potential animal collision hazard to aircraft using the runway. There are no other action alternatives, short of moving the runway or relocating the base, which would bring the base into compliance with the airfield clear zone requirements. Ellsworth AFB would mitigate the loss of the wetland as required by the provisions of the Section 404 permit.

1.3 APPLICABLE LAWS AND REGULATIONS.

In addition to NEPA and Council on Environmental Quality (CEQ) regulations, USDA Environmental Compliance Protection of Environment Executive Order (EO) 11514 Protection and Enhancement of

Environmental Quality, as amended by EO 11991, sets policy for directing the federal government in providing leadership in protecting and enhancing the quality of the nation's environment.

Table 1 provides a brief summary of laws, regulations, EOs, permits, licenses, and other entitlements that may be applicable to the proposed action and the alternative.

TABLE 1

APPLICABLE LAWS, REGULATIONS, AND PERMITS
Drainage Ditch and Erosion Control Improvement Environmental Assessment
Ellsworth Air Force Base

Law, EO, Regulation, or Permit	Description	Type of Permit, Waiver, or Approval Required
AFI 32-7061	Environmental impact analysis process.	EA process.
Comprehensive Environmental Response, Compensation and Liability Act 1980, as amended (CERCLA or Superfund)	Sets the application of cleanup liability to specific parties and provides statutory mechanisms to obtain liability protections.	Requires a construction waiver and USEPA/SD DENR review and concurrence.
Section 404 of the Clean Water Act	Regulates the discharge of fill materials in "Waters of the U.S.," which include wetlands.	Section 404 CWA permit required due to filling 0.2 acres of jurisdictional wetlands.
The Endangered Species Act of 1973	Requires Federal agencies to determine the effects of their actions on animal and plant species currently in danger of extinction (endangered) and those that may become endangered in the future (threatened), their critical habitats, and to take steps to conserve and protect the species.	Ellsworth AFB has no listed species or critical habitat – no permit or consultation required.
Migratory Bird Treaty Act, and Executive Order 13186	Strives to protect migratory birds and related habitat.	Consulted Fish and Wildlife Service of South Dakota – no permit required; fill of wetland may result in incidental take of migratory birds.
Executive Order 11988	EO given to avoid the adverse impacts associated with the occupancy and modification of floodplains.	0.2 acres of wetlands would be filled and therefore an equal amount of wetlands will be created elsewhere on Ellsworth AFB.

TABLE 1

APPLICABLE LAWS, REGULATIONS, AND PERMITS
Drainage Ditch and Erosion Control Improvement Environmental Assessment
Ellsworth Air Force Base

Law, EO, Regulation, or Permit	Description	Type of Permit, Waiver, or Approval Required
Executive Order 11990	EO given to avoid the adverse impacts associated with the destruction or modification of wetlands.	0.2 acres of wetlands would be filled and therefore an equal amount of wetlands will be created elsewhere on Ellsworth AFB.
Unified Facilities Criteria 3-260-01	Provides guidance to all services on airfield and heliport planning and design.	n/a guidance only

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 DESCRIPTION OF PROPOSED ACTION.

The Air Force proposes to extend an existing stormwater culvert located near the primary instrument runway to meet airfield clear zone requirements. The extension would involve adding approximately 850 linear feet of concrete culvert to the existing stormwater culvert that extends from under the south edge of the primary instrument runway and discharges into a drainage ditch and associated wetlands. Once the culvert is installed and connected, the drainage ditch would be backfilled to provide a graded level area in the airfield clear zone. A one-to-one mitigation would occur for the 0.2 acres of jurisdictional wetlands. The mitigation would be constructed at the 26-acre block of land south of the riding stables, east of the RV storage lot, and north of the CE building, which has an existing drainage ditch running through it (figure 5).

2.2 NO ACTION ALTERNATIVE DESCRIPTION

The "no action" alternative provides a description of the current and continued use of the drainage area to carry stormwater collected from the runway, hangar, and operational areas associated with flightline activities. This alternative includes baseline information for understanding the changes associated with the proposed action.

Portions of the existing drainage ditch are approximately 20 feet deep and would continue to pose a risk to aircraft in an emergency landing within the airfield clear zone. The area also attracts wildlife which poses a potential animal collision hazard to aircraft using the runway.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS.

No other action alternatives, short of moving the runway or relocating the base, would bring the base into compliance with the airfield clearing zone requirements. Fencing and/or kevlar wire could be placed around and across the wetlands to deny access to the wildlife; however, this would not eliminate clear zone safety issues and was not carried forward for further analysis.

2.4 SUMMARY OF IMPACTS

The summary in Table 2 describes the impacts of the proposed action compared to the "no action" alternative for each impacted resource. A detailed analysis of these impacts is provided in Section 4.0.

TABLE 2

IMPACTS OF THE PROPOSED ACTION COMPARED TO THE "NO ACTION" ALTERNATIVE
Drainage Ditch and Erosion Control Improvement Environmental Assessment
Ellsworth Air Force Base

Resource	No Action	Proposed Action
Soils and Sediment	No soils or sediments would be affected.	During construction, erosion control measures would be implemented to reduce erosion and downstream sedimentation effects.
Water Resources	No water resources would be affected.	During construction, erosion control measures would be implemented to reduce erosion and downstream sedimentation effects. Potential impacts to surface water and groundwater resulting from disturbing the OU-12 ERP area would be controlled by minimizing the area disturbed and implementing erosion control and design measures.
ERP Site	Previous ERP corrective actions would not be affected. Potential for construction worker or wildlife exposure would not exist.	Requires construction waiver, and USEPA/SD DENR review and concurrence. There would be little or no disruption of ERP corrective actions. Slight potential for construction worker exposure to contaminated soil, surface water, and sediment would require coordination with ERP.
Flight Safety	The clear zone would continue to be unavailable for aircraft emergency maneuvers. Deer bedding in the airfield clear zone would continue to pose a threat to aircraft on the flightline.	Airfield clear zone requirements would be met. Bedding areas for deer would be removed, reducing potential for contact of deer with aircraft.
Biological Resources	Existing plant and animal communities would remain.	Approximately 1.2 acres of non-wetland riparian and associated drainage slope vegetation/wildlife habitat within project limits would be converted to upland mown grass. Safety fence placed at construction limits would help minimize impacts by providing a visual indicator to restrict the movement of construction equipment. Would coordinate with SDGFP to minimize impacts to Swainson's hawk habitat, no nesting habitat would be affected. Reduction in potential wildlife exposure to contaminated sediments/soils in ditch after culvert is installed.

TABLE 2

IMPACTS OF THE PROPOSED ACTION COMPARED TO THE "NO ACTION" ALTERNATIVE
Drainage Ditch and Erosion Control Improvement Environmental Assessment
Ellsworth Air Force Base

Resource	No Action	Proposed Action
Wetlands	No wetlands impacts would occur.	Approximately 0.2 acres of jurisdictional wetlands would be filled as part of the project, requiring a USACE Section 404 permit. Safety fence placed at construction limits would help minimize impacts by providing a visual indicator to restrict the movement of construction equipment. A one-to-one wetland mitigation would be constructed at the 26-acre block of land south of the riding stables, east of the RV storage lot, and north of the CE building, which has an existing drainage ditch running through it.
Noise	No impacts would occur.	The proposed action would occur in the Day-Night Average A-Weighted Sound Level (DNL) 80 decibel (db) area, which is suitable for agricultural and mining activities (comparable to construction). Work on the project would be conducted between 0600 and 2200 hours.
Air Quality	No impacts would occur.	Impacts due to dust are expected to be minimal due to the small area disturbed; action would be taken to reduce the generation of dusts.

3.0 AFFECTED ENVIRONMENT

This section describes relevant existing environmental conditions for resources potentially affected by the proposed action and alternatives described in Section 2.0. In accordance with NEPA, the CEQ regulations, and AFI 32-7061, the description of the affected environment focuses only on those resource areas subject to impacts, commensurate with the anticipated level of environmental impacts. Resources most likely affected by implementation of the proposed action and are analyzed in this EA include: soils and sediment; water resources; ERP site; flight safety; biological resources; wetlands; noise; and air quality.

The following resources were not considered for detailed analysis because neither the proposed action nor the no action alternative would impact them. No archeological resources are known to exist on the Base (RTI 1997), therefore this resource was not considered for detailed analysis. Air Force policy, under the National Historic Preservation Act, is to suspend any activities associated with ground disturbing work if archaeological resources are found, and evaluate the site for archaeological significance. A recent command update to the Cultural Resources Management Plan has identified potential historic facilities in three different historical areas of the Base. None of these buildings would be affected by the proposed action, so historic resources were not considered for detailed analysis. The proposed action would have no impact on any of the following issues: Ellsworth AFB land use, infrastructure, hazardous or solid waste disposal quantities, or socioeconomics. Environmental justice concerns the disproportionate effect of a Federal action on low-income or minority populations. The existence of disproportionately high and adverse impacts depends on the nature and magnitude of the effects identified for each of the individual resources. Since no adverse effects would occur because of the proposed action, neither minority nor low-income groups would be affected disproportionately. Therefore, environmental justice was eliminated from further analysis.

3.1 RESOURCES AFFECTED BY PROPOSED ACTION

3.1.1 Soils and Sediment.

The primary soil type in the affected area is the Nunn clay loam that occurs on the summits and back slopes of high terraces, and associated minor soils that occur on gently and moderately sloping units on high terraces and in lower landscape positions.

3.1.2 Water Resources

Groundwater at Ellsworth AFB is encountered in a shallow, unconfined aquifer. The aquifer consists of the weathered/fractured zone of the Pierre Shale and the overlying unconsolidated deposits. The top of competent (non-fractured and unweathered) Pierre Shale defines the base of the aquifer. The flow direction and groundwater flow velocity varies across Ellsworth AFB. Drinking water for Ellsworth AFB is piped from Rapid City.

The industrial areas at Ellsworth AFB drain into seven watersheds, four of which drain into unnamed tributaries of Box Elder Creek and three of which drain into unnamed tributaries of Elk Creek. The drainageways from the industrial areas of the Base are permitted under SD DENR Surface Water Discharge Permit No. SD-0000281.

3.1.3 ERP Site

The OU-12 ERP area has very little undisturbed surface vegetation since it has been used for the disposal of construction debris (Air Force 1996a). The surface material for the final cover for the OU-12 area consists of 18-inches of compacted soils overlain by 6-inches of topsoil that has been revegetated. This resulted in a 2-foot thick cap over all of the OU-12 area, improved drainage, and the establishment of vegetative cover (Air Force 1996a).

The Air Force initiated several environmental investigation activities at Ellsworth AFB in 1985 through the ERP. In addition, on August 30, 1990 (55 FR 35509), Ellsworth AFB was listed on the USEPA's National Priorities List. A Federal Facility Agreement (FFA) signed in January 1992 went into effect on April 1, 1992. The FFA establishes a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions for Ellsworth AFB in accordance with Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, and the National Oil and Hazardous Substances Pollution Contingency Plan. It also states the oversight procedures for USEPA and the SD DENR to ensure Air Force compliance with the specific requirements.

The ditch is located in the northern half of OU-12 (Figure 3). An OU is a discrete action that is part of an entire site remedy response action. OU-12 comprises actions to mitigate human exposure to contaminated soil and groundwater at the former Hardfill No. 1 landfill.

The FFA identified 11 potential source area OUs at Ellsworth AFB as well as a Base-wide groundwater OU. The proposed drainage improvement area is located on an ERP site, OU-12. The corrective remedy selected in the Record of Decision (ROD) for OU-12 included two primary components: containing materials that are or may be in Hardfill No. 1 by providing a designed soil cover system, and using institutional controls, such as reviews and approvals by Air Force and other agencies, to ensure that the integrity of the designed cover is maintained and reduce potential construction worker exposure to materials that may be present in the fill areas

The continuing order issued by the Installation Commander restricts or places limitations on the installation of any new underground utilities or other construction activities in Hardfill No. 1 to prevent accidental exposures to construction workers. The order also mandates that if the soil cover is ever removed or breached, the OU-12 ROD-established area of attainment (fill areas that received the soil cover) must be re-evaluated to determine the need for a replacement cap or other remedial action.

3.1.4 Flight Safety.

The existing ditch is approximately 20 feet deep in some areas and could cause damage to aircraft in an emergency landing within the airfield clear zone. The ditch and associated wetlands also attract deer and birds, which pose an animal collision hazard to aircraft using the runway. In Fiscal Year (FY) 2003, there were four deer sightings in the vicinity of the runway. Bird Aircraft Strike Hazard statistics show that most bird strike incidents have been non-damaging to aircraft. During FY 1997 through 2001, the number of incidents damaging to aircraft ranged from one to five annually. At least one reportable incident has occurred every year during this time period.

3.1.5 Biological Resources

Three habitat types are present at Ellsworth AFB: 1) remnant mixed-grass prairie located on less disturbed areas of the Base; 2) riparian habitats located mostly along the western edge of the Base; and 3) disturbed habitat resulting from continuous mowing, livestock grazing, and human development.

Preparation of this EA considers the ecological risk assessment conducted during the OU-11 and OU-12 RIs and also considers information in the *Integrated Natural Resources Management Plan, Ellsworth AFB* (Air Force 1997, 2001). Additionally, the *Final Base Wide Wetland Management Plan, Tier 1, Ellsworth Air Force Base, South Dakota* (Air Force 1996c), was reviewed to determine the presence of various plant and animal species at Ellsworth AFB and their relationship to that portion of OU-12 that includes the proposed drainage ditch improvement. According to a 1994 biological inventory determination of Ellsworth AFB by Peabody and Williams, no Federally listed species or critical habitats were located on Base. However, since that document was prepared, the black-tailed prairie dog (*Cynomys ludovicianus*), which exists at the Base but not in the project area, has been added as a candidate species for Federal listing (USFWS, South Dakota Field Office, January 2002). Migratory bird species such as ducks, Canada geese, and hawks migrate through the base in the spring and fall. Mule deer and white-tailed deer have also been observed.

The SDNHP maintains a list of sensitive plant species, which was reviewed and compared to the species lists developed during the RI and by Peabody and Williams (1994). None of the plant species on the SDNHP list were encountered by either the RI field team or during the Peabody and Williams inventory. The OU-12 RI concluded that the lack of any sensitive plant species based on two independent and intensive surveys at Ellsworth AFB suggests a low likelihood of any sensitive plant species on the Base.

Due to their isolation from human activity, proximity to surrounding habitat areas, and seasonally prolonged hydrology that provides habitat for aquatic-dependant species, the affected wetlands at OU-12 provide some of the better-quality wildlife habitat compared to other RI-affected Base wetland areas. The RI identified two bird species that have been observed in the project vicinity, Swainson's hawk (*Buteo swainson*) and loggerhead shrike (*Lanius ludovicianus*), that are protected under the Migratory Bird Treaty Act.

Swainson's hawk is considered a species of concern by the SDNHP. Swainson's hawks nest in trees, often near riparian and wetland habitats, preferring areas with minimal exposure to human disturbance. In 1994, a Swainson's hawk nest was noted in the riparian wetland an estimated 600 feet south of the proposed project construction limits. Within the affected areas are three trees although none of which currently show signs of past or present habitation by Swainson's hawk or any other protected or migratory bird. Therefore, this project would not alter the nesting habitat of the Swainson's hawk. The loggerhead shrike is not ranked by the SDNHP. Shrikes prefer tall grass and shrub habitat and are not necessarily associated with wetlands since the observed shrike may have been a migratory rather than resident sighting (Peabody and Williams 1994).

3.1.6 Wetlands.

The *Wetlands Delineation at Ellsworth Air Force Base, Pennington and Meade Counties, South Dakota* (Mariah Associates, Inc. 1994), identifies this area as part of the fire training area drainage that consists of three distinct wetlands encompassing approximately 4.7 acres. The wetlands occur within a channel, which flows to the south where it is diverted at the alert apron, and is impounded north of Kenny Road. The drainage continues on the other side of Kenney Road where it exits the Base. Water was present throughout the channel at the time of the wetland mapping, with notable ponding occurring in some areas.

A tributary north of the oil/water separator impoundment did not have flowing water, but areas of periodic ponding and obligate wetland vegetation were present. The proposed 850-foot extension falls within Wetland Delineation Plot No. S-46 and is described as having a channel width of three to ten feet containing Cottonwood (*Populus deltoides*, 3-5 percent cover), Sandbar willow (*Salix exigua*, 10-15 percent cover), common three square bulrush (*Scirpus pungens*, 15-20 percent cover), creeping spikerush *(Eleocharis palustris*, 15-20 percent cover), and black bulrush (*Scirpus pallidus,* 5 percent cover).

3.1.7 Noise.

The project area is located in the air clear zone adjacent to the primary instrument runway. Current noise levels vary in relation to aircraft landing and takeoff. Ellsworth AFB typically employs a quiet-hours program in which aircraft operations (certain takeoff and landing patterns as well as engine run-ups) are avoided during the "environmental night," after 10:00 pm and before 7:00 am every day of the week. At the Base, noise exposure from airfield operations typically occurs beneath main approach and departure corridors along the runway and in areas immediately adjacent to parking ramps and aircraft staging area. The area in question falls in the 80+ dB range (Ellsworth AFB AICUZ Study, 1994)

3.1.8 Air Quality.

The air quality in both Pennington and Meade Counties meets the National Ambient Air Quality Standards. The actual PM_{10} emissions for the Base as a whole are 2.4 tons per year (tpy); potential emissions are 14.6 tpy. The USEPA limit for PM_{10} is 50 tpy. Ambient PM_{10} concentrations at the Base are 18.8 $\mu g/m^3$.

3.1.9 Hazardous Material and Hazardous Waste

Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Act (OSHA); and Emergency Planning and Community Right-to-Know Act. Hazardous materials have been defined in AFI 32-7086 Hazardous Material Management, to include any substance with special characteristics that could harm people, plants, or animals when released.

Hazardous waste is defined in the Resource Conservation and Recovery Act (RCRA) as any solid, liquid, contained gaseous or semisolid waste, or any combinations of wastes that could or do pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitability, or corrosiveness. In addition, certain types of waste are "listed" or identified as hazardous in 40 CFR 261.

Ellsworth AFB is a large-quantity generator of hazardous waste under the RCRA. Common waste streams include paint and associated wastes, expired shelf life items, and drained water from fuel tanks. All hazardous waste generated by Ellsworth AFB is manifested to a USEPA permitted treatment, storage, and disposal facility. Hazardous waste is properly segregated, stored, characterized, labeled, and packaged for initial collection at one of 12 designated initial satellite accumulation points at Ellsworth AFB. There are two 90-day Hazardous Waste Storage Areas (HWSA) at Ellsworth AFB. All hazardous waste stored in 90-Day HWSAs is transported to USEPA permitted treatment, storage, and disposal facilities for permanent disposal (personal communication, Greg Johnson, Chief of Environmental Planning, Ellsworth AFB).

The ERP is the process through which contaminated sites and facilities are identified and characterized and existing contamination is contained, removed, and disposed of to allow for beneficial reuse of the property. ERP sites include landfills, underground waste, fuel storage areas, and maintenance-generated wastes and are discussed under the "Geology and Soils" section.

4.0 ENVIRONMENTAL CONSEQUENCES

Changes to the human and natural environments that may result from the proposed action and no action alternative were evaluated relative to existing environmental conditions, as described in Section 3.1. For each environmental resource, anticipated direct and indirect effects were assessed, considering both short- and long-term project effects. The potential for significant environmental consequences was evaluated using the context and intensity considerations as defined in CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1508.27).

4.1 SOILS AND SEDIMENTS

4.1.1 Proposed Action.

Water erosion is a management concern for the steeper areas of those soils where there is little or no vegetative cover. Standard construction practices would be implemented in the form erosion and sediment control during construction, minimization of steep slopes, and early establishment of vegetative cover to minimize erosion.

4.1.2 No Action Alternative.

No soil disturbances would occur.

4.2 WATER RESOURCES

4.2.1 Proposed Action.

During construction, erosion control measures as designated by Section 02935 of Base Specifications for Construction, such as the use of straw bales and/or silt fence, would be implemented. This would reduce downstream sedimentation effects during construction. Potential impacts to surface water and groundwater resulting from disturbing the OU-12 ERP area would be controlled through minimizing the area disturbed and implementing erosion control and design measures.

4.2.2 No Action Alternative.

No impacts to surface water or groundwater would occur.

4.3 ERP

4.3.1 Proposed Action

The RI conducted at OU-12 in 1993 and 1994 indicated that surface water, sediment, and soils within OU-12 were contaminated with various chemicals. The chemical constituents, primarily petroleum components from flightline operations and storage activities, presented at OU-12 pose potential risks to human health and the environment. Corrective actions in the form of a soil cover and institutional controls were taken.

Because of this potential risk, the proposed project would require a construction waiver. It would also require USEPA and SD DENR review and concurrence concerning planning and construction of the

project. Design and construction activities would need to be coordinated with ERP staff to ensure construction workers are not significantly exposed to the chemical constituents present in ditch surface water, sediments, and nearby soils.

Careful planning and construction techniques are readily available to minimize construction exposure to affected media and related potential risks. Once the improvement is completed, graded soil within the airfield clear zone area would present much lower potential human health and ecological risk from exposure compared to the buried, affected soils and sediments.

Current project layout plans indicate that only the northern 150 to 200 feet of cover on the northern-most former hardfill area in OU-12 would be within the construction footprint of the proposed improvement. Construction of the proposed drainage ditch and erosion control improvement would be coordinated to ensure no permanent impact on completed remediation activities associated with OU-12, since the integrity of the previously placed soil covers on the OU-12 fill areas must be maintained.

4.3.2 No Action Alternative. There would be no potential for human or wildlife exposure to contaminated environmental media**.**

4.4 FLIGHT SAFETY

4.4.1 Proposed Action. The extension of the existing stormwater culvert would allow airfield clear zone requirements to be met, reducing the potential for loss of human life and property damage associated with aircraft emergencies. Filling and leveling the airfield clear zone would eliminate shelter for deer and birds, thus reducing potential for animal and wildlife strikes. Since similar habitat is found throughout the Base, deer and birds would use other areas, reducing hazardous potential contact of deer and birds with aircraft.

4.4.2 No Action Alternative. The Ellsworth AFB would continue to be out of compliance with Air Force clear zone requirements for flightline incident maneuverability. Under current airfield clear zone conditions, an aircraft emergency could result in the potential loss of life and property damage. An animal collision hazard would also continue to exist since deer and birds shelter in the drainage ditch and associated wetlands.

4.5 BIOLOGICAL RESOURCES

4.5.1 Proposed Action

4.5.1.1 General.

The proposed project involves an 850-foot extension of a concrete stormwater culvert and subsequent filling and grading of the area to grades comparable to those adjacent to the flightline. Impacts to wetlands and riparian habitat would be minimized by placing safety fencing at the construction limits to prevent access by construction equipment or vehicles. The 850-foot segment of the project would permanently alter 1.2 acres of the existing non-wetland riparian and associated drainageway slope plant and animal community within the proposed construction limits from riparian and associated habitat to mown upland grass. Some downstream temporary disruptive effects may also occur during and after construction of the drainage improvement. Once a new "equilibrium" is reestablished in the drainage ditch, the community is expected to continue to receive runoff from the same upstream sources as before

the project was started. There would be a corresponding reduction in exposure potential for wildlife since the soils and sediments in a portion of the drainage ditch would be covered and approximately 0.2 acres of the jurisdictional wetland would be filled. A one-to-one mitigation for the 0.2 acres filled would be constructed in the 26-acre block of land south of the riding stables, east of the RV storage lot, and north of the CE building, which has an existing drainage ditch running through it.

4.5.1.2 Endangered Species Act.

In 1994, a Swainson's hawk nest was noted in the riparian wetland an estimated 600 feet south of the proposed project construction limits. There are three trees in the affected area. None of them show signs of past or present habitation by Swainson's hawk or any other protected or migratory bird. Therefore, this project would not alter the nesting habitat of the Swainson's hawk. The Air Force would coordinate with the DGFP to avoid/minimize impacts to Swainson's hawk habitat. The loggerhead shrike is not ranked by the SDNHP. Since shrikes prefer tall grass and shrub habitat and are not necessarily associated with wetlands, the observed shrike may have been a migratory rather than resident sighting (Peabody and Williams 1994). The black-tailed prairie dog, a candidate species for Federal listing, exists at the Base but not in the project area.

4.5.1.3 Migratory Birds.

A number of migratory bird species pass through or reside in the region. The species considered by the USFWS to be a Species of Management Concern is the Swainson's hawk. It is possible that other migratory bird species could be observed in the area affected by the proposed action during part of the year. This project would convert approximately 1.2 acres of non-wetland riparian and associated habitat to upland mown grass. The only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant species.

4.5.2 No Action Alternative.

No wildlife habitat would be altered.

4.6 WETLANDS

4.6.1 Proposed Alternative.

Approximately 0.2 acres of jurisdictional wetland would be filled. The construction limits would be fenced to keep construction equipment from moving into other wetlands areas. 28 CES/CEV would obtain a Section 404 Nationwide Permit from the USACE.

4.6.2 No Action Alternative.

No wetlands would be filled.

4.7 NOISE

4.7.1 Proposed Action.

During construction, normal construction machinery noise would be produced. According to the 1994 Air Installation Compatible Use Zone study, the project would occur in the DNL 80 decibel (db) area, which is suitable for agricultural and mining activities (comparable to construction). Work on the project would be conducted between 0600 and 2200 hours.

4.7.2 No Action Alternative. No construction noise would occur.

4.8 AIR QUALITY

4.8.1 Proposed Action.

Air emissions generated from filling in the drainage ditch would come from three sources: diesel fuel combustion in construction equipment vehicles and generators, material handling of fill and ballast, and vehicle traffic. Combustion emissions are based on the equipment's horsepower ratings and estimated hours of operation. Dust emission for the handling of fill material and ballast are based on the amount of material moved. The vehicle dust emissions are based on the expected mileages for the vehicles used.

The estimate of temporary emissions due to demolition and hauling activities generated by this project was based on worst-case, in terms of air emission potential, from the embankment removal alternative of the Environmental Assessment for Railroad Disposition, Ellsworth AFB, SD (2003). Any other action alternative would result in lower emissions. Table 4-1 shows emissions in tons of pollutant per year for a very similar proposed project, that is the removal and regrading Ellsworth AFB's railroad. The railroad removal would actually require the redistribution of several times more soil than filling in the drainage ditch. Therefore, the emissions listed in Table 4.1 are conservatively high for the proposed project.

Table 3. Projected Emissions Related to Removing Ellsworth AFB's Railroad

Pollutant	Project Air Emissions (tons/year)	Current Actual Air Emissions for Ellsworth AFB (2001-2002) (tons/year)
PM	77.45	—
PM_{10}	43.40	2.2
NO_X	2.31	21.4
SO_X	0.13	0.5
CO	1.49	11.1
VOC	.33	1.8

Emissions calculations are documented in Appendix A. Emission factors were taken from *Fifth Edition, AP-42, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources* (USEPA 1998), and *CEQA Air Quality Handbook* (SCAQMD 1993).

These emissions would be short-term and would occur over a period of 5 to 8 weeks. Though not considered for permitting purposes, the emissions generated by the project's activities are less than USEPA thresholds for determining major source status. Construction emissions for all but PM_{10} and

VOCs are less than the annual emissions generated by stationary sources at the Base. PM_{10} and VOC emissions are similar to the potential emissions from the base. Fugitive PM_{10} is generated primarily from truck traffic over unpaved roadways, bulldozer, and compactor operations. No control efforts were assumed for these activities, so these estimates are conservatively high. Emissions of all pollutants from this construction activity contribute very little to the total pollutant load in AQCR 205.

4.8.2 No Action Alternative. No impacts would occur.

5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS. This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

5.1.1 Definition of Cumulative Effects

Council on Environmental Quality regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed action. The scope must consider geographic and temporal overlaps among the proposed action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the proposed action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, this EA analysis addresses three questions:

1. Does a relationship exist such that elements of the proposed action might interact with elements of past, present, or reasonably foreseeable actions?

2. If one or more of the elements of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?

3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

5.1.2 Past, Present, and Reasonably Foreseeable Future Actions. This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the proposed action, but also the incremental contribution of past, present, and reasonably foreseeable actions.

5.1.2.1 Past and Present Actions Relevant to the Proposed Action

Since its activation, Ellsworth AFB has supported a number of missions. The 44th Strategic Missile Wing supported Minuteman missiles from its creation until its deactivation in 1994. Currently, Ellsworth AFB is the home of the 28th Bomb Wing (B1-B bombers) with two bomb squadrons, the 37th Bomb squadron and the 77th Bomb Squadron. Total employment is approximately 3,500 military and civilian employees, down from a high point population of 7,200 in 1989. As an active military installation, the Base undergoes periodic changes in mission and in training requirements. This process of change is consistent with the United States defense policy that the Air Force must be ready to respond to threats to American

interests throughout the world. Recent projects include the construction of the 77th Bomb Squadron Headquarters in 1999, the Fire Crash Rescue Building in 1998, and the Rushmore Center in 1995-1996.

The Environmental Restoration Program (ERP) resulted in the implementation of remedial actions such as groundwater extraction systems and landfill covers. The Base, like any other major institution, also requires occasional new construction, facility improvements, and infrastructure upgrades. Ellsworth AFB is currently upgrading portions of its water and wastewater systems and is completing the construction of an education center and Civil Engineer Squadron facility.

5.1.2.2 Incremental Impacts of the Proposed Action with Reasonably Foreseeable Future Actions. During the timeframe FY 02 to FY 05, Ellsworth AFB has proposed a number of actions that are independent of the proposed action and would be implemented irrespective of a decision on the proposed drainage ditch and erosion control improvement. Construction programs include a permanent live ordnance loading area (LOLA) in 2002 and new family housing, also in 2002.

5.1.3 Analysis of Cumulative Impacts

The following analysis examines how the impacts of these other actions might be affected by those resulting from the proposed action at Ellsworth AFB, and whether such a relationship would result in potentially significant impacts not identified when the proposed action if considered alone.

The 37th Bomb Squadron Headquarters, Fire Crash Rescue Building, Military Working Dog Kennel, Lancer Learning Center, and Rushmore Center have been constructed within the last five years and were determined not to have a significant effect on the environment.

An EA for the proposed housing replacement program (Air Force 2002) also concluded that the program would not have a significant impact on the environment. Other current and future infrastructure actions would not be expected to result in more than negligible impacts either individually or cumulatively. All actions affect very specific, circumscribed areas, and the magnitude of the actions is minimal.

Corrective action measures related to the ERP program have adversely impacted jurisdictional wetlands, and the proposed LOLA would adversely impact a non-jurisdictional wetland. These past and future actions, as well as the proposed action, which would also adversely impact a jurisdictional wetland, have included or would include one-to-one wetland mitigation at other areas of the Base. Therefore, the combined environmental consequences of these actions would remain below the threshold of significance for this resource.

Stormwater runoff from the proposed action and previous and future projects has been or would be controlled through minimizing the area disturbed and implementing erosion control and design measures as specified in the construction documents. Therefore, the combined impacts of these actions would remain well below the threshold of significance for any resource category.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The NEPA requires that environmental analysis include identification of "… any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations.

Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the demolition of an historic building).

For the proposed action, most resource commitments are neither irreversible nor irretrievable. Most environmental consequences are short term and temporary (such as air emissions from construction). Those limited resources that may involve a possible irreversible or irretrievable commitment under the proposed action are discussed below.

The drainage ditch and erosion control improvement project would require consumption of limited amounts of materials typically associated with construction (e.g., concrete). The amount of these materials used is not expected to significantly decrease the availability of the resources.

6.0 PERSONS AND AGENCIES CONSULTED

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8.0 REFERENCES

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USAF 2003. Final Environmental Assessment. Railroad Disposition, Ellsworth Air Force Base, South Dakota. September 2003.

FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)

DRAINAGE DITCH AND EROSION CONTROL IMPROVEMENT
FOR THE PRIMARY INSTRUMENT RUNWAY - ELLSWORTH AIR FORCE BASE
MEADE AND PENNINGTON COUNTIES, SOUTH DAKOTA

INTRODUCTION

In order to meet airfield clear zone requirements (Air Force Manual 32-1123, Volume 1, Chapter 3, Task 3.5), the United States Air Force (USAF) proposes to extend an existing stormwater culvert located near the primary instrument runway at Ellsworth Air Force Base (AFB).

Currently, there is a stormwater culvert that extends from under the south edge of the Base primary instrument runway and discharges to an open ditch and associated wetlands. The ditch is located in the northern half of Operable Unit 12 (OU-12). Air Force Manual 32-1123, Volume 1, Chapter 3, Task 3.5 states that there needs to be 1,000 feet of level graded area in the airfield clear zone. The existing ditch is approximately 20 feet deep in some areas and could cause damage to aircraft in an emergency landing within the airfield clear zone. The ditch and associated wetlands also attract deer and birds, which pose an animal collision hazard to aircraft using the runway.

DESCRIPTION OF THE PROPOSED ACTION

The proposed action would involve adding approximately 850 linear feet of concrete culvert to the existing stormwater culvert that extends from under the south edge of the primary instrument runway and discharges into a drainage ditch and associated wetlands. Once the culvert is installed and connected, the drainage ditch would be backfilled to provide a graded level area in the airfield clear zone.

There are no other action alternatives, short of moving the runway or relocating the Base, that would bring the base in compliance with airfield clear zone requirements. Fencing and/or Kevlar wire could be placed around and across the wetlands to deny access to the wildlife; however, this would not eliminate clear zone safety issues and was not carried forward for further analysis.

ALTERNATIVES TO THE PROPOSED ACTION

No Action: Under the no action alternative, the existing drainage ditch would not be modified, despite the non-compliant airfield clear zone.

SUMMARY OF ENVIRONMENTAL IMPACTS

Remedial investigations at OU-12, which falls within the proposed project area, were conducted in 1993/94. These investigations indicated that chemical constituents, primarily petroleum components from flightline operations and storage activities, could pose potential risks to human health and the environment within the proposed construction area. Corrective actions in the form of a soil cover and institutional controls were implemented. The project would require a construction waiver and U.S. Environmental Protection Agency and South Dakota Department of Environment and Natural Resources review and concurrence. Design and construction activities would be coordinated with Environmental Restoration Program staff to avoid exposing construction workers to chemical constituents present in surface water, sediments, and nearby soils. Planning and construction techniques are available

to minimize exposure to affected media and related potential risks and to control temporary construction impacts. The soil cover would be replaced to maintain corrective action integrity.

Approximately 1.2 acres of non-wetland riparian and associated drainageway slope vegetation and wildlife habitat within the project construction limits would be converted to upland mown grass. Approximately 0.2 acres of jurisdictional wetlands would be filled as part of the project. This loss cannot be avoided. However, the project has been designed to limit the loss of wetlands to the minimum necessary to meet established safety criteria. Safety fence would be installed to prevent construction equipment and/or vehicles from entering adjacent wetland and riparian areas. All 0.2 acres of the filled jurisdictional wetland would be replaced one-to-one at the 26-acre block of land south of the riding stables, east of the RV storage lot, and north of the CE building, which has an existing drainage ditch running through it. The new wetlands location is preferable to the location that would be filled in with the proposed action for the following reasons:

- Wetlands in general increase the potential for attracting wildlife and increasing the aircraft strike hazard in the airfield environment. It is in the interest of safety to minimize wetlands in the airfield.

- The wetlands involved are a small acreage of ditch banks only marginally performing the functions of wetlands. They are not considered of extraordinary value to wildlife in general, or protected species in particular.

The 28 CES/CEV would obtain a permit from the U.S. Army Corps of Engineers (USACE) in accordance with Section 404 of the Clean Water Act of 1977, as amended in 1991. Temporary dust, noise, and stormwater impacts may occur, but can be easily controlled by common construction practices and oversight. Completion of the project would bring Ellsworth AFB into compliance with USAF requirements for a 1000-foot graded area in the airfield clear zone.

FINDINGS

Implementing the proposed action would not have a significant impact upon the environment, nor would it constitute a major Federal action of significant magnitude to warrant preparation of an Environmental Impact Statement. Pursuant to Executive Order 11988 and Executive Order 11990, the authority delegated in SAFO 791.1, and taking the above information into account, I find that there is no practicable alternative to this action, and the proposed action includes all practicable measures to minimize harm to the wetlands and floodplain environments.

_____ Date: _____

BRUCE A. WRIGHT
Lieutenant General, USAF
Vice Commander

APPENDIX A

AIR QUALITY ANALYSIS

FIGURES